ILUKA

December 5, 2011

Ms. Janine Howard
Water Permit Writer
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

RE: Renewal Package for VPDES Permit # VA0092126, Iluka Resources – Old Hickory Mine Concentrator Site

Ms. Howard:

Attached is the Renewal Package for the Iluka Resources Inc – Old Hickory Mine Concentrator Site, VPDES Permit #VA0092126.

The Old Hickory Mine Concentrator was decommissioned in January 2009. At that time the majority of process water was discharged from the site through the approved outfalls. The site is currently in the final stages of reclamation, all of the equipment has been removed, the ponds have been reclaimed and top soil distribution and seeding is underway. The topography of the site has been changed due to the reclamation activities and all Stormwater that falls on the site during rain events drains to the pond that feeds Outfall 002. Water flow to Outfall 001 ceased due to the new topography, so Outfall 001 was removed. Sheet flow was achieved in the immediate area of Outfall 001.

Due to the site changes since January 2009 and the continuing reclamation activities Iluka would like to request that Outfall 001 be removed from the above referenced Permit and that Outfall 002 be converted to a Stormwater Outfall.

EPA Form 1, EPA Form 2F, the VPDES Permit Application Addendum, and the VPDES Public Notice Billing Information Form are attached. The maps associated with this renewal package are out of date due to the recent and ongoing reclamation activities at the site. New aerial photographs do not exist at this time.

Should you have any questions or require further information, I may be reached via mobile at 804.721.7312 or via email at Kevin.rideout@iluka.com.

Sincerely,

Kevin Rideout

Iluka Resources Inc. – VA Operations
12472 St. John Church Rd., Stony Creek, VA 23882
Phone: 434.348.4300 Fax: 434.246.3039

EHS Specialist
Iluka Resources Inc.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	VAR000008276		D
1	2 13	14	15

LABEL ITEMS

- **I. EPA I.D. NUMBER**
- **II. FACILITY NAME**
- **III. FACILITY MAILING ADDRESS**
- **IV. FACILITY LOCATION**

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI(except VI-B which must be completed regardless). Complete all items if no label has been proved. Refer to the instructions for detailed item descriptions and for the legal authorization under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental from listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.?** (FORM 2A)	☐ 16	☒ 17	☐ 18	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.?** (FORM 2B)	☐ 19	☒ 20	☐ 21
C. Is this facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	☐ 22	☒ 23	☐ 24	D. Is this proposal facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.?** (FORM 2D)	☐ 25	☒ 26	☐ 27
E. Does or will this facility treat, store, or dispose of **hazardous wastes?** (FORM 3)	☐ 28	☒ 29	☐ 30	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	☐ 31	☒ 32	☐ 33
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	☐ 34	☒ 35	☐ 36	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfer by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	☐ 37	☒ 38	☐ 39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area?** (FORM 5)	☐ 40	☒ 41	☐ 42	J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment are?** (FORM 5)	☐ 43	☒ 44	☐ 45

III. NAME OF FACILITY

C	SKIP	
1		Former Hickory Mine Concentrator Site
15	16-29	30 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2: Kevin Rideout	434 348 4316
15 16 45	46 48 49 51 52 55

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 3: 12472 St. John Church Road	C 4: Stony Creek	Va	23882
15 16 45	15 16 40	41 42	47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME
C 5: 19540 Bolsters Road	Dinwiddie
15 16 45	46 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE
C 6: Stony Creek	Va	23882	
15 16 40	41 42	47 51	52 54

CONTINUED ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST		B. SECOND	
9995	*(specify)* Non Operating Establishment		*(specify)*
C. THIRD		D. FOURTH	
	(specify)		*(specify)*

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
Iluka Resources Inc	☒ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other," specify.)*

F = FEDERAL; M = PUBLIC (other than federal or state); S = STATE; O = OTHER (specify); P = PRIVATE

P *(specify)*

D. PHONE *(area code & no.)*: C A | 434 | 348 | 4300

E. STREET OR PO BOX: 12472 St. John Church Road

F. CITY OR TOWN	G. STATE	H. ZIP CODE
Stony Creek	VA	23882

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	VA0092126	D. PSD *(Air Emissions from Proposed Sources)*	
B. UIC (Underground Injection of Fluids		E. OTHER *(specify)*	*(Specify)*
C. RCRA (Hazardous Wastes)		E. OTHER *(specify)*	*(Specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Iluka Resources Inc leases mining rights in Dinwiddie County, VA for the purpose of mining and then gravity separation of mineral sands (titanium-bearing ilmenite and zircon). Mining operations ceased in January 2009. The facility has been removed and the site is being reclaimed.

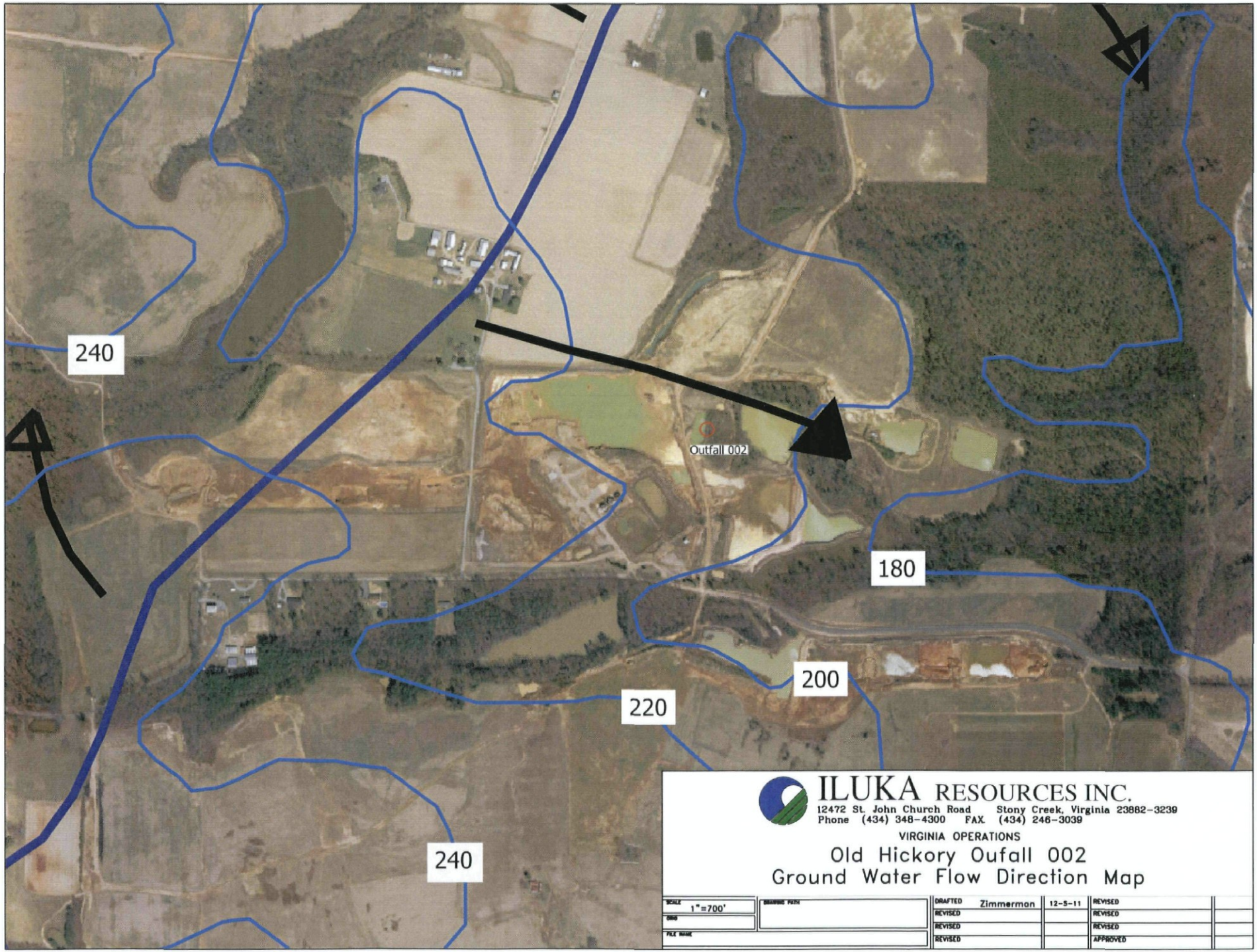
XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
KATHLEEN B. CARROLL PRESIDENT		12-05-11

COMMENTS FOR OFFICIAL USE ONLY

C



ILUKA RESOURCES INC.

12472 St. John Church Road Stony Creek, Virginia 23882-3239
Phone (434) 348-4300 FAX (434) 246-3039

VIRGINIA OPERATIONS

Old Hickory Oufall 002
Ground Water Flow Direction Map

SCALE 1"=700'	DRAWING PATH	DRAFTED Zimmerman	12-5-11	REVISED	
GRID		REVISED		REVISED	
FILE NAME		REVISED		REVISED	
		REVISED		APPROVED	

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
VAR000008276

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
Outfall 002	36	55	264	077	34	002	Unnamed Tributary to Harris Swamp

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
002	1.0 acres	41.6 acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

In the last three years the only stored matereial at the site was oversize material which includes small rock and larger grain sand. This material is no longer stored, but has been used in the reclamation process at the site.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002	The storm water from the site flows toward the lower area that feeds the pond prior to Outfall 002. In the channel prior to the pond, a weir is located, so that the flow of water can be regulated. Water that passes through the weir flows over a rock dam and then into the pond. Settling of solids occur in the pond. The water discharges the pond through the outfall which consist of rip rap.	1-U

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Kevin Rideout	Kevin Rideout	12/6/11

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Sampling was conducted on October 5, 2011 from Outfall 002, which consisted of Attachment A parameters and parameters required under Form 2F.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

N/A

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Primary Laboratories, Inc	7423 Lee Davis Road Mechanicsville, VA 23111	804.559.9004	All parameters under Attachment A and Form 2 F

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
MATTHEW B BLACKWELL (PRESIDENT)	804-848 4300
C. Signature	D. Date Signed
	05 - DEC - 2011

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<5.0 mg/L	N/A			1	
Biological Oxygen Demand (BOD5)	<3.0 mg/L	<3.0 mg/L			1	
Chemical Oxygen Demand (COD)	66.7 mg/L	44.5 mg/L			1	
Total Suspended Solids (TSS)	32.0 mg/L	31.4 mg/L			1	
Total Nitrogen	3.76 mg/L	2.8 mg/L			1	
Total Phosphorus	0.51 mg/L	0.62 mg/L			1	
pH	Minimum 6.61	Maximum 6.68	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Copper	<0.020 mg/L	<0.020			1	None Present

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
10/3/2011	480 minutes	0.26"	96 hours	5gpm	30,600 gallons

7. Provide a description of the method of flow measurement or estimate.

The depth, width, and velocity of the discharing water was measured flowing through the outfall and the discharge rate was calculated. The date of the sampling and the storm event are two days apart due to the time it took for the storm water to flow into the pond and cause the discharge.

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

18-Oct-11

Iluka Resources, Inc
Attn: Kevin Rideout
12472 St Johns Church Road
Stoney Creek, VA 23882

Date Received: 6-Oct-11
Date Sampled: 5-Oct-11
Work Order No: 1110051-01
Client ID: **Hickory 002**

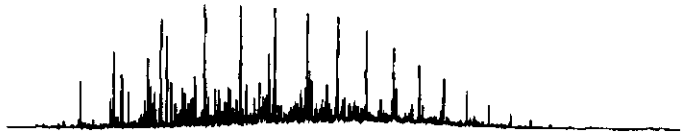
Test Description	Final Result	Reporting Limit	Units of Measure	Standard Methods (18)	Date Analyzed	Tech. Initials
Oil & Grease	<5.0	5.0	mg/L	EPA 1664 A	14-Oct-11	HV
BOD	<3.0	3.0	mg/L	5210 B	7-Oct-11 at 13:30	NA
COD	66.7	2.0	mg/L	5520 C	7-Oct-11 at 10:00	NA
TSS	32.0	0.5	mg/L	2540 D	6-Oct-11	HV
TKN	3.7	0.2	mg/L	4500-N_{org} C	13-Oct-11 at 8:30	NA
Nitrate/Nitrite	0.10	0.01	mg/L	4500 NO_3^- E	12-Oct-11 at 14:00	NA
Total Nitrogen	3.76	0.20	mg/L	4500-N_{org} C	13-Oct-11 at 15:00	NA
Total Phosphorus	0.51	0.01	mg/L	4500P E	17-Oct-11 at 14:00	NA
Total Metals						
Copper	<0.020	0.020	mg/L	3030E/3120B	17-Oct-11	HV

Signature: _____ Date: 10/18/11

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306



ANALYTICAL LABORATORY REPORT

Iluka Resources, Inc
Attn: Kevin Rideout
12472 St Johns Church Road
Stoney Creek, VA 23882

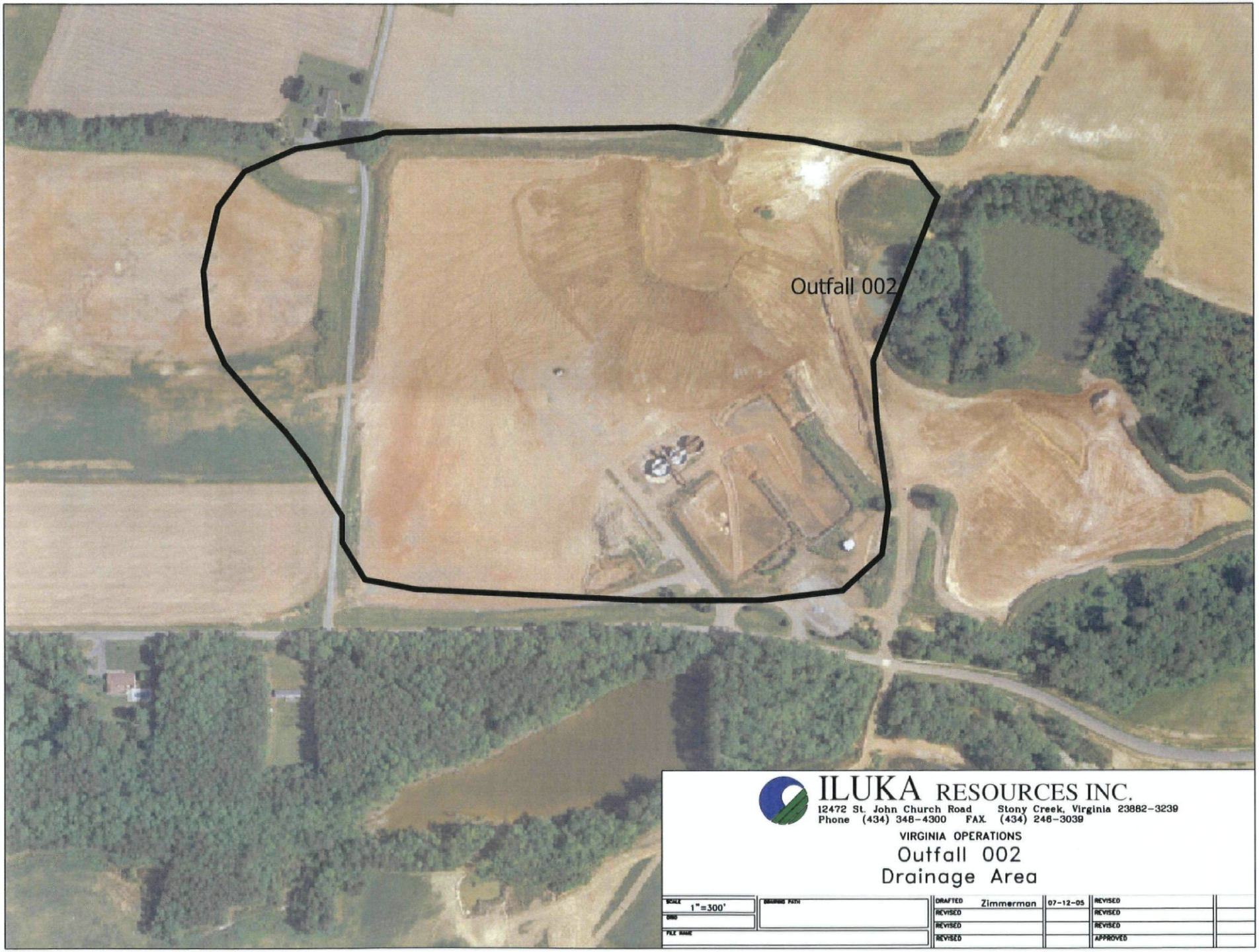
19-Oct-11

Date Received: 7-Oct-11
Date Sampled: 6-Oct-11
Work Order No: 1110069-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Standard Methods (18)	Date Analyzed	Tech. Initials
Oil & Grease	<5.0	5.0	mg/L	EPA 1664 A	14-Oct-11	HV
BOD	<3.0	3.0	mg/L	5210 B	7-Oct-11 at 13:30	NA
COD	44.5	2.0	mg/L	5520 C	7-Oct-11 at 10:00	NA
TSS	31.4	1.0	mg/L	2540 D	13-Oct-11 at 8:30	HV
Total Nitrogen	2.8	0.2	mg/L	4500-N_{org} C	19-Oct-11 at 12:00	NA
Total Phosphorus	0.62	0.01	mg/L	4500P E	17-Oct-11 at 14:00	NA
Total Metals						
Copper	<0.020	0.020	mg/L	3030E/3120B	17-Oct-11 at 16:42	HV

Signature: _____ Date: 10/19/11

Parry L. Bragg
Laboratory Manager



ILUKA RESOURCES INC.
12472 St. John Church Road Stony Creek, Virginia 23882-3239
Phone (434) 348-4300 FAX (434) 246-3039
VIRGINIA OPERATIONS

Outfall 002 Drainage Area

SCALE 1"=300'	DRAWING PATH	DRAFTED Zimmerman	07-12-05	REVISED	
DWG		REVISED		REVISED	
FILE NAME		REVISED		REVISED	
		REVISED		APPROVED	

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	1.4	<0.0014 mg/L	G or C	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	1.0	<0.001 mg/L	G or C	1/5 YR
7440-43-9	Cadmium, dissolved	(3)	0.3	<0.003 mg/L	G or C	1/5 YR
16065-83-1	Chromium III, dissolved [8]	(3)	3.6	<0.0036 mg/L	G or C	1/5 YR
18540-29-9	Chromium VI, dissolved [8]	(3)	1.6	<0.005 mg/L	G or C	1/5 YR
7440-50-8	Copper, dissolved	(3)	0.50	<0.0005 mg/L	G or C	1/5 YR
7439-92-1	Lead, dissolved	(3)	0.50	<0.0005 mg/L	G or C	1/5 YR
7439-97-6	Mercury, dissolved	(3)	1.0	<0.001 mg/L	G or C	1/5 YR
7440-02-0	Nickel, dissolved	(3)	0.94	<0.00094 mg/L	G or C	1/5 YR
7782-49-2	Selenium, Total Recoverable	(3)	2.0	<0.002 mg/L	G or C	1/5 YR
7440-22-4	Silver, dissolved	(3)	0.20	<0.0002 mg/L	G or C	1/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)	<0.002 mg/L	G or C	1/5 YR
7440-66-6	Zinc, dissolved	(3)	3.6	<0.0036 mg/L	G or C	1/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05	<0.05 ug/L	G or C	1/5 YR
57-74-9	Chlordane	608	0.2	<0.20 ug/L	G or C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)	<0.2 ug/L	G or C	1/5 YR
72-54-8	DDD	608	0.1	<0.10 ug/L	G or C	1/5 YR
72-55-9	DDE	608	0.1	<0.10 ug/L	G or C	1/5 YR
50-29-3	DDT	608	0.1	<0.10 ug/L	G or C	1/5 YR
8065-48-3	Demeton	(4)	(5)	<1 ug/L	G or C	1/5 YR
333-41-5	Diazinon	(4)	(5)	<1 ug/L	G or C	1/5 YR
60-57-1	Dieldrin	608	0.1	<0.10 ug/L	G or C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	<0.10 ug/L	G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	<0.10 ug/L	G or C	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1	<0.10 ug/L	G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
72-20-8	Endrin	608	0.1	<0.10 ug/L	G or C	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	(5)	<0.10 ug/L	G or C	1/5 YR
86-50-0	Guthion	(4)	(5)	<1 ug/L	G or C	1/5 YR
76-44-8	Heptachlor	608	0.05	<0.10 ug/L	G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)	<0.10 ug/L	G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)	<0.05 ug/L	G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)	<0.05 ug/L	G or C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)	<0.05 ug/L	G or C	1/5 YR
143-50-0	Kepone	(9)	(5)	<0.10 ug/L	G or C	1/5 YR
121-75-5	Malathion	(4)	(5)	<1 ug/L	G or C	1/5 YR
72-43-5	Methoxychlor	(4)	(5)	<0.10 ug/L	G or C	1/5 YR
2385-85-5	Mirex	(4)	(5)	<0.10 ug/L	G or C	1/5 YR
56-38-2	Parathion	(4)	(5)	<1 ug/L	G or C	1/5 YR
1336-36-3	PCB Total	608	7.0	<1.0 ug/L	G or C	1/5 YR
8001-35-2	Toxaphene	608	5.0	<5.0 ug/L	G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0	<10 ug/L	G or C	1/5 YR
120-12-7	Anthracene	625	10.0	<10 ug/L	G or C	1/5 YR
92-87-5	Benzidine	(4)	(5)	<10 ug/L	G or C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	<10 ug/L	G or C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	<10 ug/L	G or C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	<10 ug/L	G or C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	<10 ug/L	G or C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)	<10 ug/L	G or C	1/5 YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)	<10 ug/L	G or C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	<10 ug/L	G or C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)	<10 ug/L	G or C	1/5 YR
218-01-9	Chrysene	625	10.0	<10 ug/L	G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	<10 ug/L	G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	<10 ug/L	G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	<10 ug/L	G or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	<10 ug/L	G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	<10 ug/L	G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)	<10 ug/L	G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0	<10 ug/L	G or C	1/5 YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0	<10 ug/L	G or C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)	<10 ug/L	G or C	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0	<10 ug/L	G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)	<10 ug/L	G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0	<10 ug/L	G or C	1/5 YR
86-73-7	Fluorene	625	10.0	<10 ug/L	G or C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)	<10 ug/L	G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)	<10 ug/L	G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)	<10 ug/L	G or C	1/5 YR
67-72-1	Hexachloroethane	(4)	(5)	<10 ug/L	G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	<10 ug/L	G or C	1/5 YR
78-59-1	Isophorone	625	10.0	<10 ug/L	G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0	<10 ug/L	G or C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)	<10 ug/L	G or C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)	<10 ug/L	G or C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)	<10 ug/L	G or C	1/5 YR
129-00-0	Pyrene	625	10.0	<10 ug/L	G or C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	<10 ug/L	G or C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(4)	(5)	<5.0 ug/L	G	1/5 YR
107-13-1	Acrylonitrile	(4)	(5)	<5.0 ug/L	G	1/5 YR
71-43-2	Benzene	624	10.0	<5.0 ug/L	G	1/5 YR
75-25-2	Bromoform	624	10.0	<5.0 ug/L	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
56-23-5	Carbon Tetrachloride	624	10.0	<5.0 ug/L	G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	<5.0 ug/L	G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0	<5.0 ug/L	G	1/5 YR
67-66-3	Chloroform	624	10.0	<5.0 ug/L	G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	<5.0 ug/L	G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0	<5.0 ug/L	G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)	<5.0 ug/L	G	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)	<5.0 ug/L	G	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)	<5.0 ug/L	G	1/5 YR
100-41-4	Ethylbenzene	624	10.0	<5.0 ug/L	G	1/5 YR
74-83-9	Methyl Bromide	(4)	(5)	<5.0 ug/L	G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)	<5.0 ug/L	G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR
10-88-3	Toluene	624	10.0	<5.0 ug/L	G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)	<5.0 ug/L	G	1/5 YR
79-01-6	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0	<5.0 ug/L	G	1/5 YR
	RADIONUCLIDES					
	Beta Particle & Photon Activity (mrem/yr)	(4)	(5)	2.4 ± 1.7 pCi/L	G or C	1/5 YR (PWS)
	Gross Alpha Particle Activity (pCi/L)	(4)	(5)	1.0 ± 1.4 pCi/L	G or C	1/5 YR (PWS)
	Combined Radium 226 and 228	(4)	(5)	0.62 ± 0.49 pCi/L	G or C	1/5 YR (PWS)
	Uranium	(4)	(5)	0.09 ± 0.01 pCi/L	G or C	1/5 YR (PWS)
	ACID EXTRACTABLES [6]					
95-57-8	2-Chlorophenol	625	10.0	<10 ug/L	G or C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	<10 ug/L	G or C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	<10 ug/L	G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	(5)	<10 ug/L	G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)	<10 ug/L	G or C	1/5 YR
25154-52-3	Nonylphenol	(5)	(5)	<10 ug/L	G or C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0	<10 ug/L	G or C	1/5 YR
108-95-2	Phenol	625	10.0	<10 ug/L	G or C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	<10 ug/L	G or C	1/5 YR
MISCELLANEOUS						
776-41-7	Ammonia as NH3-N	350.1	200	0.08 mg/L	C	1/5 YR
16887-00-6	Chlorides	(4)	(5)	10.7 mg/L	C	1/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100	0.03 mg/L	G	1/5 YR
57-12-5	Cyanide, Free	(4)	10.0	<0.010 mg/L	G	1/5 YR
N/A	*E. coli* (N/CML)	(4)	(5)	<1.0 MPN/100 ml	G	1/5 YR
7783-06-4	Dissolved Sulfide	(5)	(5)	<0.05 mg/L	G	1/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)	<30 ng/L	G or C	1/5 YR
471-34-1	Hardness (mg/L as $CaCO_3$)	(4)	(5)	25.0 mg/L	G or C (10)	1/5 YR

MATTHEW B BLOCKWELL / PRESIDENT.

Name of Principal Exec. Officer or Authorized Agent/Title

12-05-11

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

15-Nov-11

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Hickory Outfall 002
Date Received: 6-Oct-11
Date Sampled: 5-Oct-11
Work Order No: 1110053-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Total Metals						
Selenium	<0.002	0.002	mg/L	3120 B	24-Oct-11	HV
Dissolved Metals						
Antimony	<0.0014	0.0014	mg/L	3120 B	24-Oct-11	HV
Arsenic	<0.001	0.001	mg/L	3120 B	24-Oct-11	HV
Cadmium	<0.003	0.003	mg/L	3120 B	24-Oct-11	HV
Chromium III	<0.0036	0.0036	mg/L	3120 B	24-Oct-11	HV
Copper	<0.0005	0.0005	mg/L	3120 B	24-Oct-11	HV
Lead	<0.0005	0.0005	mg/L	3120 B	24-Oct-11	HV
Mercury	<0.001	0.001	mg/L	3112 B	19-Oct-11	HV
Nickel	<0.00094	0.00094	mg/L	3120 B	24-Oct-11	HV
Silver	<0.0002	0.0002	mg/L	3120 B	24-Oct-11	HV
Thallium	<0.002	0.002	mg/L	3120 B	24-Oct-11	HV
Zinc	<0.0036	0.0036	mg/L	3120 B	24-Oct-11	HV
Total Metals						
Selenium	<0.002	0.002	mg/L	3020/6010B		HV
Chromium VI	<0.005	0.005	mg/L	3500	6-Oct-11 at 13:30	NA

Primary Laboratories, Inc.
Results

15-Nov-11

Date Sampled: 5-Oct-11
Work Order No: 1110053-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Dissolved Sulfide	<0.05	0.05	mg/L	4500S^{2-}E	11-Oct-11 at 8:30	HV
Chlorine	<0.01	0.01	mg/L	4500CL G	4-Nov-11	PB
Cyanide, Free	<0.010	0.010	mg/L	4500CN E	18-Oct-11	HV
Cyanide, Total	<0.010	0.010	mg/L	4500CN E	18-Oct-11	HV
Hardness	25.0	0.1	mg/L as $CaCO_3$	2340 C	17-Oct-11 at 10:30	NA

Date Sampled: 5-Oct-11
Work Order No: 1110053-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Uranium	0.09 ± 0.01	0.67	pCi/L	200.8	26-Oct-11 at 16:01	SC***
Gross Alpha	1.0 ± 1.4	2.1	pCi/L	7110 B	20-Oct-11 at 16:14	SC***
Gross Beta	2.4 ± 1.7	1.1	pCi/L	7110 B	20-Oct-11 at 16:14	SC***
Combined Radium (226/228)	0.62 ± 0.49	-	pCi/L	calculation	26-Oct-11 at 7:29	SC***
Tributyltin	<30	30	ng/L	GC/FPD	13-Oct-11 at 20:19	SC***
Pesticides						
Chlorpyrifos	<0.2	0.2	ug/L	EPA 622	14-Oct-11	SC**
Diazinon	<1	1	ug/L	EPA 622	14-Oct-11	SC**
Demeton	<1	1	ug/L	EPA 622	14-Oct-11	SC**
Guthion	<1	1	ug/L	EPA 622	14-Oct-11	SC**
Malathion	<1	1	ug/L	EPA 622	14-Oct-11	SC**
Parathion	<1	1	ug/L	EPA 622	14-Oct-11	SC**

** Analysis sub-contracted to Reed & Associates.
***Analysis subcontracted to Universal Laboratories.

Primary Laboratories, Inc.
Results

15-Nov-11

Date Sampled: 5-Oct-11
Work Order No: 1110053-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Pesticides						
Aldrin	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Chlordane	<0.20	0.20	ug/L	EPA 608	14-May-10	HV
Dieldrin	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDT	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDE	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDD	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan sulfate	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan I	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan II	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endrin	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endrin Aldehyde	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Alpha-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Beta-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Delta-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Gamma-BHC (Lindane)	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Heptachlor	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Heptachlor Epoxide	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Kepone	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Methoxychlor	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Mirex	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
PCB-1221	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1232	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1242	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1016	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1248	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1254	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1260	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
Toxaphene	<5.0	5.0	ug/L	EPA 608	14-May-10	HV

Primary Laboratories, Inc.
Results

15-Nov-11

Units of Measure:	ug/L
Method Numbers*:	EPA 624
Date Analyzed:	6-Oct-11
Technician:	PB
Date Sampled:	5-Oct-11
Work Order No:	1110053-01
Client ID:	**Hickory Outfall 002**

Test Description	Final Result	Reporting Limit
Acrolein	<5.0	5.0
Acrylonitrile	<5.0	5.0
Benzene	<5.0	5.0
Bromoform	<5.0	5.0
Carbon tetrachloride	<5.0	5.0
Chlorobenzene	<5.0	5.0
Chlorodibromomethane	<5.0	5.0
Chloroform	<5.0	5.0
Dibromochloromethane	<5.0	5.0
1,2-Dichloroethane	<5.0	5.0
1,1-Dichloroethylene	<5.0	5.0
trans-1,2-Dichloroethylene	<5.0	5.0
1,2-Dichloropropane	<5.0	5.0
1,3-Dichloropropene	<5.0	5.0
Ethylbenzene	<5.0	5.0
Methylene Chloride	<5.0	5.0
Methyl Bromide	<5.0	5.0
1,1,2,2-Tetrachloroethane	<5.0	5.0
Tetrachloroethylene	<5.0	5.0
Toluene	<5.0	5.0
1,1,2-Trichloroethane	<5.0	5.0
Trichloroethene	<5.0	5.0
Vinyl Chloride	<5.0	5.0

Primary Laboratories, Inc.
Results

15-Nov-11

Units of Measure:	ug/L
Method Numbers*:	EPA 625
Date Analyzed:	14-Oct-11
Technician:	HV
Date Sampled:	5-Oct-11
Work Order No:	1110053-01
Client ID:	**Hickory Outfall 002**

Test Description	Final Result	Detection Limit
Acenaphthene	<10	10
Anthracene	<10	10
Benzidine	<10	10
Benzo(a) anthracene	<10	10
Benzo(b) fluoranthene	<10	10
Benzo(k) fluoranthene	<10	10
Benzo(a)pyrene	<10	10
bis-(2-Chloroethyl)ether	<10	10
bis-(2-Chloroisopropyl) ether	<10	10
Butyl benzyl phthalate	<10	10
2-Chloronaphthalene	<10	10
Chrysene	<10	10
Dibenzo(a,h)anthracene	<10	10
Di-n-butyl phthalate	<10	10
1,2-Dichlorobenzene	<10	10
1,3-Dichlorobenzene	<10	10
1,4-Dichlorobenzene	<10	10
3,3-Dichlorobenzidine	<10	10
Diethyl phthalate	<10	10
bis-2-Ethylhexyl Phthalate	<10	10
Dimethyl phthalate	<10	10
2,4-Dinitrotoluene	<10	10
1,2-Diphenylhydrazine	<10	10
Fluoranthene	<10	10
Fluorene	<10	10
Hexachlorobenzene	<10	10
Hexachlorobutadiene	<10	10
Hexachlorocyclopentadiene	<10	10
Hexachloroethane	<10	10

Primary Laboratories, Inc.
Results

15-Nov-11

Units of Measure:	ug/L
Method Numbers*:	EPA 625 (con't)
Date Analyzed:	14-Oct-11
Technician:	HV
Date Sampled:	5-Oct-11
Work Order No:	1110053-01
Client ID:	**Hickory Outfall 002**

Test Description	Final Result	Detection Limit
Indeno(1,2,3-cd) pyrene	<10	10
Isophorone	<10	10
Nitrobenzene	<10	10
N-Nitrosodimethylamine	<10	10
N-Nitrosodiphenylamine	<10	10
N-Nitrosodi-n-propylamine	<10	10
Pyrene	<10	10
1,2,4-Trichlorobenzene	<10	10
2-Chlorophenol	<10	10
2,4-Dichlorophenol	<10	10
2,4-Dimethylphenol	<10	10
2,4-Dinitrophenol	<10	10
2-Methyl-4,6-Dinitrophenol	<10	10
Nonylphenol	<10	10
Pentachlorophenol	<10	10
Phenol	<10	10
2,4,6-Trichlorophenol	<10	10

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 11/16/11

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

18-Oct-11

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Hickory Outfall 002 (Attachment A)
Date Received: 7-Oct-11
Date Sampled: 6-Oct-11
Work Order No: 1110070-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Standard Methods (18)	Date Analyzed	Tech. Initials
Ammonia	0.08	0.01	mg/L	4500NH3 F	17-Oct-11 at 8:30	NA
Chloride	10.7	1.0	mg/L	4500CL B	7-Oct-11 at 13:30	NA
Total Residual Chlorine	0.03	0.01	mg/L	4500CL G	7-Oct-11 at 8:17	PB

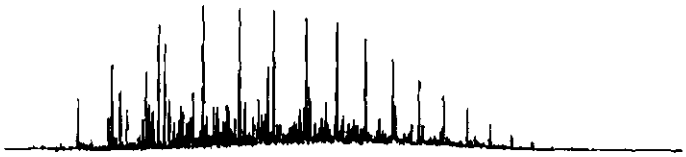
* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 10/18/11

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306



ANALYTICAL LABORATORY REPORT

7-Oct-11

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Attachment A
Date Received: 5-Oct-11
Date Sampled: 5-Oct-11
Work Order No: 1110047-01
Client ID: **Hickory 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Standard Methods (18)	Date Analyzed	Tech. Initials
E Coli	<1.0	1.0	MPN/100ml	Colilert	5-Oct-11 at 16:00	MS

*All methods are from Standard Methods 18th Edition, unless otherwise noted.

Signature: _____ Date: 10/7/11

Parry L. Bragg
Laboratory Manager

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in Dinwiddie Monitor in accordance with 9 VAC 25-31-290.C.2.

Agent/Department to be billed:	Environment, Health, and Safety Department
Owner:	Iluka Resources Inc
Agent/Department Address:	12472 St. John Church Road
	Stony Creek, VA 23882
Agent's Telephone No.:	434.348.4316
Printed Name:	Kevin Rideout
Authorizing Agent – Signature:	Kevin Rideout
Date:	12|5|11

VPDES Permit No. VA0092126
Hickory Mine Concentrator

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Iluka Resources Inc

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Yes ☐ No X

3. **Provide the tax map parcel number for the land where the discharge is located.** 94-20 Dinwiddie

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** 0

5. **What is the design average effluent flow of this facility?** 0 MGD
   For industrial facilities, provide the max. 30-day average production level, include units:

   In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☐ No X
   If "Yes", please identify the other flow tiers (in MGD) or production levels:

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**
   Only Storm water exist on the site, no wastewater is present.

   0 % of flow from domestic connections/sources

   Number of private residences to be served by the treatment works: 0

   0 % of flow from non-domestic connections/sources

7. **Mode of discharge:** ☐ Continuous X Intermittent ☐ Seasonal
   Describe frequency and duration of intermittent or seasonal discharges:
   Discharges of Stormwater occur after some rain events.

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
   ___ Permanent stream, never dry
   ___ Intermittent stream, usually flowing, sometimes dry
   ___ Ephemeral stream, wet-weather flow, often dry
   ___ Effluent-dependent stream, usually or always dry without effluent flow
   X Lake or pond at or below the discharge point
   ___ Other:

9. **Approval Date(s):**
   O & M Manual Submitted 02/08 **Sludge/Solids Management Plan**

   Have there been any changes in your operations or procedures since the above approval dates? Yes ☐ No X